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ABSTRACT

Interviews with 548 heads of household randomly selected from the Columbus, Ohio, telephone directory provided data on the subjects' political knowledge, news information sources (television, newspapers), and educational level. These data supported three of five hypotheses about the relation between knowledge level and media dependence. There was a significant relationship between television dependence and local knowledge, such that increased dependence on television for news and information led to a decreased knowledge level. The opposite relationship existed for newspaper dependence: more highly dependent subjects had higher levels of local knowledge than low dependent subjects. Results for the third hypothesis supported the knowledge gap hypothesis. In a situation of low salience and low conflict, there was a clear difference between lower and higher educated subjects, with the higher educated having a higher level of local information retention than the lower educated. Neither of the two remaining hypotheses found support in the analysis. There were no significant differences in the gap between mean knowledge scores of higher educated and lower educated groups when low and high television dependent subjects were compared. The same finding held true for low and high newspaper dependent subjects. (RL)

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The Knowledge Gap Hypothesis and Media Dependence: An Initial Study

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The Knowledge Gap Hypothesis and Media Dependence: An Initial Study

The "knowledge gap hypothesis" posited by Tichenor, Donohue and Olien (1970) suggests that mass media have a differential effect on the growth of knowledge in a social system. As information is infused into a social system through mass media channels those social system members with higher socio-economic status acquire and retain more information than do those with lower socio-economic st atus. Instead of leveling the amount of information across all members, Tichenor, et al., hypothesize that mass media increase the gap between various groups in terms of the gross amount of information held on any particular topic.

In their initial formulation of the "knowledge gap hypothesis" Tichenor, et al., reasoned that since those persons with higher socio-economic status have better communication skills, more stored information, increased relavant social contacts and better retention of information than those persons with lower socio-economic status, the higher SES categories are likely to acquire more information per exposure to media messages. Their hypothesis, though, has found mixed support.

Several studies clearly support that hypothesis. Budd, MacLean and Barnes (1966) reported that during a highly publicized news event the highly educated members of their sample learned more about the event and learned about it more quickly than less educated subjects. When subjects were exposed to newspaper articles dealing with medical, biological and social scientific topics, Tichenor, Donohue and Olien (1970) discovered a clear difference in information levels based on SES categories. Donohue, Tichenor and Olien (1973) again found the presence of a know-

I would like to thank Ellen Wartella, Thomas McCain, and Lee Becker for their helpful criticisms during the preparation of this paper.

ledge gap but only on national issues; on local issues the gap was significantly less clear.

Other studies, though, have reported contrary results. Douglas, Westley and Chaffee (1970) reported that a campaign to inform a community of the problems of mental retardation had its greatest effect on those with little education, the campaign was found to have produced a leveling of information holding on that topic. In a study of news diffusion, Larson and Hills (1954) found that subjects living in working class neighborhoods heard of a news event more frequently than those in professional neighborhoods, thus, lower SES subjects gained more knowledge than higher SES subjects. Finally, Katzman (1970) suggested that differential levels of information between information rich and information poor subjects varied over time - at times increasing, at times decreasing - suggesting the presence of intervening variables.

While contradictory findings are apparent in the reported research, under certain conditions the knowledge gap hypothesis remains a viable hypothesis for explaining differential knowledge gain in a social system. Ettema and Kline (1977) and Donohue, Tichenor and Olien (1975) have addressed the apparent anomolies in the research and have posited several contingent conditions that may reduce the differential gain of knowledge due to levels of education, etc. Donohue, et al., suggested that saliency of the topic, levels of system conflict and the structure of the community directly affect the magnitude of knowledge gaps. They posit that as saliency and conflict increase, the knowledge gap across SES levels will decrease; conversely, as saliency and conflict ultimately decrease, the knowledge gap will subsequently increase. The classic

knowledge gap, then, will occur only when topics or issues are of low saliency and low conflict. Similarly, Ettema and Kline (1977) suggested that motivation to gain information is the prime contingent condition: as motivation to gain information increases across a social system the knowledge gap will decrease. It seems reasonable to assume that Donohue, et al., have isolated essentially the same set of conditions: that is saliency and conflict would seem to correlate positively with motivation to gain information. Thus, as saliency and conflict increase on a topic the motivation to gain information on that topic would increase also.

Neither Donohue, et al., nor Ettema and Kline argued that the knowledge gap hypothesis is invalid under all conditions. Though Ettema and Kline argued that SES categories, and particularly education levels, were insufficient to explain all the variance in differential knowledge gain, they also argued that there may be fundamental differences among subjects in basic reading skills and "in the development of cognitive schema" (190). Equally, they suggest that there are differential motivations to apply basic cognitive capacities based on SES differences. Thus, it can be argued that in situations of low motivation the knowledge gap phenomena will occur and can be explained in large measure by differences in communication skills as well as other SES related factors.

If one defines communication skills as the general ability to process, integrate and retain pieces of information, then it is reasonable to posit that such a variable should be central in understanding differential knowledge levels. This, of course, assumes that communication skills are not evenly distributed across SES levels. It further can be argued the education level should be a rough indicator of skill levels. As education

increases it is likely that one's ability to read will increase. Equally, as education increases one will develop more elaborate structures into which information can be integrated. These assumptions, of course, may not explain differential knowledge levels on all topics. Information about topics that can be experienced directly and relatively fully in everyday life may be less affected by educational levels than more abstract topics such as the function of local government, national economic policies and the like. Those more abstract issues require different types of communication skills which are more directly affected by level of education, relavant social contacts and higher levels of retained information (both of which are highly correlated with level of education).

Under conditions of low motivation to gain information, education must remain a central variable in understanding knowledge levels. There remain, though, other variables that have yet to be explored as possible contributing factors to the knowledge gap phenomena. Ettema and Kline (1977) suggested that, as yet, no one has studied the relative differences between newspapers and broadcasting in the production of knowledge gaps. To date, most knowledge gap research has either studied newspaper-generated information alone or, more generally, undifferentiated mass media generated information. Given that newspapers and television are distinctly different media, the possibility exists that each may have a different effect on knowledge gain, and subsequently, on the production of knowledge gaps.

At the most basic level newspapers convey their information on the printed page while television is a visual/oral medium. Those two formats require different modes of information processing.

The varing purposes of each medium may also play a role in information processing. Newspapers are primarily an information medium while television is primarily an entertainment medium. While on the surface such a distinction seems clear, in reality the functional differences and similarities for media are mixed. Katz, Blumler and Gurevitch (197) suggested that both television and newspapers function to help individuals connect themselves to society. Katz, Gurevitch and Haas (1973) posited similarities and differences between television and newspapers based on technological attributes and aesthetic qualities. Similarly, Bogart (1968-69) noted that news media compliment eachother in a number of ways such as fulfilling interests aroused by other media and exposing different aspects of the same event. Despite the similarities among varying media highlighted by such studies, two points remain clear: (1) functional differences among media are significant; and (2) those differences may affect both the level of attention individuals pay to given media and also the type and form of information they seek from the media. Finally, newspapers cover news stories in depth, often exploring issues in great detail, while television news tends to minimize indepth coverage in favor of stressing the dramatic and focusing on images and impressions, not on substantive issues (see Carey, 1976; Hofstetter and Zukin, 1979; and Robinson and McPherson, 1977). Those differences, then, may lead to varying effects on information gain.

Indeed, available research suggests that there are differential effects between newspapers and television. Studying the effects that media have on an audience's ranking of important issues, agenda setting research has found that newspapers have an overall stronger effect on

the reader's agenda than does television. Benton and Frazier (1976) reported that, while both newspapers and television have strong effects on an individual's agenda at the most general level of information (i. e., in general issue names), only newspapers set agenda at the sub-issue and specific information about the sub-issue levels. Television, then, imparts general information about the environment but does not offer large amounts of information that would lead to an agenda-setting function at more specific levels. Though Tichenor and Wackman (1973) indicated that for newspapers a person's knowledge was a function of the amount of time spent reading the newspaper, no clear trend emerged for television viewers: that is, increased television viewing did not necessarily increase information levels.

To assess the possible differential effects of those media on knowledge gain and on the attendant knowledge gaps, some measure for media usage is required. While raw exposure has traditionally been used, such a measure presents several difficulties. First, exposure measures total usage, which may include attention to irrelevant information. Second, even if an exposure measure concentration on information relative to the research topic, it does not measure level of attention. A more useful measure stems from the concept of dependency posited by DeFleur and Ball-Rokeach (1975). Their study defined dependency as an active reliance on mass mediated information and is premised on the assumption that in a complex communication system individuals need information and that the most readily available source of information on many topics is the mass media. For DeFleur and Ball-Rokeach, dependency is a necessary condition for media effects. As need for information of the type presented by the mass media increases so will

dependence on media and, in turn, so will the likelihood of various forms of media effects. As a measure, dependency seems far superior to exposure alone since it suggests levels of information seeking which, when combined with exposure itself, gives a better measure of media use. That concept conforms nicely with the basic assumptions of the uses and gratifications model presented by Katz, Blumler and Gurevitch (1974). Both the uses and gratifications and dependency models are premised on the existence of a goal-directed audience which is itself responsible for initiative in media selection.

Inherent in that definition, then, is the assumption that dependency is a motivational variable. Audience members are motivated to attend to media for information. It can further be assumed that level of motivation is not equal across any given population, thus there are levels of media dependency. Equally, since different media present information in different forms and with varying levels of detail, dependency is media specific: that is, people depend on specific media, such as newspapers or television, for necessary information.

Research suggests that level of dependency has a differential effect on audiences and that those dependent on one medium will behave differently than those dependent on another. McLeod, Becker and Byrnes (1974) reported that subjects most dependent on newspapers showed the greatest agenda-setting effect. Becker and Whitney (1978) reported that persons who were newspaper dependent knew more about local and national issues than those who were not newspaper dependent. They also posited that television dependent persons knew less about the same issues when compared to persons who were not television dependent.

In a related piece of research Becker and Fruit (1979) found that television dependent persons knew less about government than newspaper dependent persons. They also reported that differences existed between television and newspaper dependent persons in terms of their feelings of efficacy in dealing with the government. In general, then, research has indicated that television dependent people are less knowledgeable about public affairs, less trusting and more confused by the happenings of the day than newspaper dependent people (also see Clark and Fredin, 1978; Robinson, 1974; and Robinson and Zukin, 1977).

Based on the differences between television and newspapers it can be posited that a highly television dependent group will manifest a smaller knowledge gap between SES categories than will a highly newspaper dependent group. This assertion arises from the nature of dependence. Dependence implies a choice or preference for a particular media as an information source. Audience members, then, are likely to select the medium that provides the desired type and form of information. Thus, a television dependent individual may be less likely to want highly detailed discussions of topics of interest than a highly newspaper dependent individual. The highly television dependent audience, then, is faced with a self-imposed information ceiling. Ettema and Kline (1977) argued that in some cases the amount of available information is so limited that clear differences in knowledge gain are minimized. For instance, Shingi and Mody (1976) have shown that messages containing only limited amounts of agricultural information will serve to close the information gap between well informed and less informed farmers. Since the well informed farmers already had the information an information

ceiling was imposed for them; the less informed farmers were able, then, to close the knowledge gap. This "ceiling effect" is less likely to occur for the readers of newspapers since significantly more information is given in each story. The information ceiling imposed by television news should minimize differential levels of knowledge due to education.

Research by Robinson (1972) and Tichenor and Wackman (1973) lends support to that clain. Robinson found that increased exposure to television did not enhance a viewer's ability to name personalities in the news; indeed, heavy viewers were less able to preform that task than light viewers. Tichenor and Wackman reported that for newspapers as time spent reading increased so did information levels. For television viewers, though, that pattern did not hold true. In another study Torsvik (referenced in Ettema and Kline, 1977) found that less educated Norwegians learned more political information in the three years after the introduction of television in their area than did the more educated subjects. There was a leveling of knowledge levels which supports the premises. Thus, a ceiling of available information was imposed by the medium which allowed for lower educated individuals to close the knowledge gap with higher educated individuals.

There is at least one research report that posits an increased knowledge gap based on television viewing. Stauffer, Frost and Rybolt (1978) reported that college educated subjects learned significantly more from television news that did illiterate subjects, thus increasing the knowledge gap. This seems to indicate that wher extreme differences in educational level and, one would assume, extreme differences in communication skills exist, imposed ceilings due to television would not close gaps in information levles. At the same time, Stauffer, et al., used television

exposure as a treatment. No discussion was given to the relative levels of motivation to gain information, thus making the findings somewhat less relavant to this study.

Five hypotheses are suggested by the previous discussion:

H_1: Reported research has suggested that increased television viewing decreases information retention. It is hypothesized, then, that high television dependent persons will score lower on a measure of political knowledge than will low television dependent persons.

H_2: Conversely, other research has reported that increased newspaper exposure increased information levels. It is hypothesized, then, that high newspaper dependent persons will score higher on a measure of political knowledge than will low newspaper dependent persons.

H_3: The knowledge gap hypothesis predicts that in low conflict and low salient situations higher educated people retain more information than lower educated people. Thus, higher educated subjects will score higher on a measure of political knowledge than will lower educated subjects.

H_4: The previous discussion suggests an interaction between television dependence and education such that the difference between higher and lower educated subjects who are low in television dependence will be larger than the difference between higher and lower educated subjects who are high in television dependence.

H_5: The discussion also suggests an interaction between newspaper dependence and education such that the difference between higher and lower educated subjects who are high in newspaper dependence will be larger than the difference between higher and lower educated subjects who are low in newspaper dependence.

METHOD

A reanalysis of survey data collected by Professor Becker, School of Journalism, Ohio State University, from Franklin County, Ohio, in the Fall of 1977 was preformed to test the stated hypotheses. The data set was based on 548 telephone interviews with a proportional sample of male and female heads of household randomly selected from the Columbus, Ohio, telephone directory.

Knowledge scores were constructed from four political knowledge questions - What is your Congressman's name? What is his party affiliation? What is your mayor's name? What is his party affiliation? - and one question asking the respondent to offer solutions to the garbage disposal problem in Columbus, an issue with some political significance at the time. Those questions were selected from the available knowledge questions in the survey to assure conditions that would maximize the likelihood of finding a knowledge gap. The focus of the questions is on local as opposed to national information. It is assumed that those four political knowledge questions were of relatively low concern in the community and were not connected with any significant social conflict. Since 1977 was not an election year, public concern with both the congressmen and the mayor should have been minimal. Equally, none of those men were involved in any controversial issues at the time. It is assumed, though, that the majority of information people had at the time in relation to these men came from mass media sources. No measures of political interest for the subjects were available. The garbage disposal issue, while receiving some media coverage, was of relatively low concern and was associated with only minimal conflict.

Local news dependency measures were constructed from a modification of a formula developed by Becker and Whitney (1978) and used to analyze the same data set. Four questions were used to create the dependence measure:

1. How about news of what's going on in the city or township you live in? Do you get most of your local news from newspapers, radio, television, magazines, just talking to people or where?

2. Many people don't get to read a newspaper every day. About how many days a week do you read a newspaper?

3. When you are reading a newspaper and you come across items on local government, do you pay close attention, some attention, or almost no attention to them?

4. About how many days a week do you watch the local early evening news broadcasts?

There are several assumptions that underlie the dependence measures. The measure consists of four characteristics: two exposure measures, one for television news and one for newspapers; a rating of source of most local news; and a perceived attention to local news measure.[1] Subjects were considered highly newspaper dependent if they reported newspapers as their most important news source, read the newspaper six or more days a week, paid at least some attention to local news, and watched local television news less than five days a week. Subjects meeting none of these requirements were rated as low newspaper dependent while those meeting some of those requirements were rated as moderately newspaper dependent. Thus, a subject becomes more dependent as he/she meets more requirements. Each subject was also rated as to his/her television dependence. The television dependence measure was constructed similarly. Subjects were considered highly television dependent if they selected television as their major source of local news, watched local early evening television news six or more days a week, paid at least some attention to local news items and read the newspaper five or less days a week. Low and moderate dependence were assessed in the same fashion described above. High newspaper dependence and high television dependence are independent categories, i.e.

no subject was categorized as both highly newspaper and highly television dependent, while the moderate and low dependence categories for each may contain the same subjects. For newspaper dependence, there were 120 highly dependent, 170 moderately dependent and 258 low dependent subjects. For television dependence, there were 162 highly dependent, 134 moderately dependent and 268 low dependent subjects.

Educational level was included as the SES variable. Subjects were divided into high (more than a high school education, n=278) and low (a high school education or less, n=265) categories.[2] The two levels of education were relatively evenly distributed across all levels of dependence.

RESULTS

Hypothesis 1

The first hypothesis predicted that the mean knowledge scored for high television dependent subjects would be lower than the mean knowledge scores for low television dependent subjects. An Analysis of Variance was preformed on local knowledge by television dependence (see Table 1) and a significant difference was found ($F=7.072$, $df=2$, $p < .0001$). The Scheffé multiple range test was computed for this and all other *post hoc* analyses. There proved to be a significant difference between low dependent and high dependent subjects and that difference was in the predicted direction (see Table 2). There was also a significant difference between moderate and high dependent subjects though the differences between low and moderately dependent subjects were not significant. The mean knowledge scores do suggest a linear trend with the low dependent mean highest followed in decending order by moderate and high television dependent means.

Hypothesis 2

Hypothesis two predicted that the mean knowledge score for high newspaper dependent subjects would be higher than the mean knowledge score for low newspaper dependent subjects. An analysis of variance indicated a significant difference between levels of newspaper dependence ($F=10.07$, $df=2$, $p < .0001$; see Table 3). Further analysis showed a significant difference between high and low dependent subjects in the predicted direction (see Table 4). There also proved to be a significant difference between low and moderate dependent subjects with the moderately dependent group having a higher mean knowledge score. There was no significant difference between moderate and high dependent subjects.

Hypothesis 3

This hypothesis predicted that the higher educated group would have a higher mean knowledge score than the lower educated group. An ANOVA was preformed on educational level by knowledge and the results indicated a significant difference ($F=11.32$, $df=1$, $p < .0001$). A comparison of the two means showed that the difference was in the predicted direction.

Hypothesis 4

The fourth hypothesis predicted an interaction between television dependence and education. A Two-Way Analysis of Variance was computed for local knowledge by television dependence and education (see Table 1). Results indicated a significant interaction ($F=3.33$, $df=2$, $p=.05$) but the interaction pattern did not conform to the prediction. Deviation from paralellism was caused by the moderately television dependent group, showing no significant difference in mean scores for low and high educated members (see Table 2). Significant differences were found between low and high educated members for both low dependent and high dependent groups. The gap between low and high educated members of both low and high

dependent groups was almost exactly the same, a clear deviation from the hypothesis.

Hypothesis 5

The final hypothesis predicted an interaction between newspaper dependence and education. A second Two-Way ANOVA was computed for local knowledge by newspaper dependence and education (see Table 3). There proved to be main effects for both newspaper dependence and education but the interaction was not significant ($F=0.51$, $df=2$, $p>.05$). While the difference between the mean scores for low and high educated subjects increases slightly as one moves from low or high dependence, the lack of a significant deviation from paralellism indicated lack of support for the hypothesis.

DISCUSSION

The results of the analysis lend support to the first three hypotheses. There was a relationship between television dependence and local knowledge such that increased dependence on television for news and information seems to lead to a decreased knowledge level. It should be taken into consideration, though, that the measure of knowledge in this study is one of information retention. Thus, a highly television dependent individual relies heavily on television news while at the same time has minimum exposure to newspapers. For such individuals, information retention is based on a relatively short exposure to individual news stories, possibly as short as 30 seconds, presented in a complex visual/oral form. It seems reasonable to suggest that, when compared to an individual who spends more time exposed to newspapers, which would be the case with many low television dependent subjects, high television dependent subject would be expected to retain less information.

The opposite relationship exists for newspaper dependence: that is, more highly dependent subjects seem to have a higher level of local knowledge than do low dependent subjects. This would seem to follow since the higher the level of dependence the higher the exposure and attention paid to local news. Increased exposure and attention to detailed information would tend to lead to increased retention of that information.

Hypothesis three was a general test of the knowledge gap hypothesis; the results lend support to this hypothesis. In a situation of low salience and low conflict there was a clear difference between lower and higher educated subjects, with the higher educated having a higher level of local information retention than the lower educated. It is interesting to note that for the measure of local knowledge used in this study a knowledge gap was discovered while Donohue, Tichenor and Olien (1973) were unable to find a clear gap for local knowledge. This may suggest that the presence or absence of knowledge gaps is situation and/or issue/topic specific.

Neither of the two remaining hypotheses found support in the analysis. There were no significant differences in the gap between mean knowledge scores for the higher educated and lower educated groups when low and high television dependent subjects were compared. The same finding holds true for low and high newspaper dependent subjects. While these results are certainly not encouraging, they must be viewed in terms of the limitations of the measures used. The knowledge measure may be tapping constructs other than television or newspaper dependence. It is certainly possible that the measure is more directly related to individual feelings of political effecacy or political involvement than to media dependence.

Also, four of the five responses that made up the local knowledge measure were based on name and political party recall. A more topical or issue related measure may be more directly relavant to knowledge gap research. Finally, it is likely that the knowledge measure imposed an information ceiling for certain subjects, thus masking the possibility of more significant differences.

The nature of the dependence measures may also be a factor in the null findings for the fourth and fifth hypotheses. Due to the criteria used in their development, the measures do not allow for the possibility of subjects who are both highly newspaper and highly television dependent. Equally, the measures do not isolate subjects who have low dependence on both media sources. Thus, the measures may have constrained the number of possible permutations to the point where they are not a valid representation of the full range of possible media dependence categories. The nature of the measure also caused serious problems in interpreting the results for either the moderately television or the moderately newspaper dependent subjects. High dependence was defined by meeting all the established criteria and low dependence was defined as meeting only one or none of the criteria. Moderate dependence, though, was defined as meeting less than all the criteria but meeting more than one. This assumes that all subjects falling within the parameters of the category, who's membership was established by any one of the possible combinations of criteria, will behave similarly. The validity of such a category seems somewhat problematic; thus, the interpretation of results for the moderate categories was minimzed.

Finally, the nature of the phenomena being studied, i.e. knowledge, needs to be considered. This study has treated knowledge as information retention. The knowledge measure is, for the most part, tapping retention; the dependence measures are constructed from measures that are related to information retention, i.e. exposure and attention. While the knowledge gap hypothesis is based in part on information retention, implicit in the hypothesis is the issue of information comprehension. Though retention and comprehension are related, they are different cognitive precesses. One might expect that education as well as many of the other SES variables may more directly affect comprehension than retention. It is also possible that media have a differential effect on comprehension. Clearly, this is an avenue that needs further research before the knowledge gap hypothesis and its relation to media sources can be fully understood.

NOTES

[1] The difference between this measure and the one created by Becker and Whitney (1978) lies in the use of the attention measure. Becker and Whitney used attention to local news stories in the newspaper as a means of further discriminating between newspaper and television dependent subjects. The modified measure used here treats this attention measure as an estimate of general interest in local news regardless of its source.

[2] Initially, the lower education category was divided into two separate categories: high school graduates and less than a high school education. These categories were collapsed since there was no significant differences between the two.

REFERENCES

Bogart, L. (1968-69) "On the uses of mass media for important things." Public Opinion Quarterly 32: 560-74.

Budd, R. W., M. S. MacLean, Jr., and A. M. Barnes (1966) "Regularities in the diffusion of two major news events." Journalism Quarterly 43: 221-30.

Becker, L. B., and D. C. Whitney (1978) "The effects of Media dependencies on audience assessments of government." Unpublished paper presented at the annual convention of the Association for Education in Journalism.

Benton, M., and P. J. Frazier (1976) "The agenda setting function of the mass media at three levels of 'information holding'." Communication Research 3: 261-274.

Carey, J. (1976) "How news shape campaigns." Journal of Communication 26: 50-57.

Clarke, P., and E. Fredin (1978) "Newspapers, television and political reasoning." Public Opinion Quarterly 42: 143-60.

DeFleur, M., and S. Ball-Rokeach (1975) Theories of Mass Communication. 3rd edition (New York: David McKay Company).

Donohue, G. A., P. J. Tichenor, and C.N. Olien (1973) "Mass media functions, knowledge and social control." Journalism Quarterly 50: 652-659.

_____ (1975) "Mass media and the knowledge gap: a hypothesis reconsidered." Communication Research 2: 3-23.

Douglas, D. F., B. W. Westley, and S. H. Chaffee (1970) "An information campaign that changed community attitudes." Journalism Quarterly 47: 479-487.

Ettema, J. S., and F. G. Kline (1977) "Deficits, differences, and ceilings, contingent conditions for understanding the knowledge gap." Communication Research 4: 179-202.

Hofstetter, C. R., and C. Zukin (1979) "TV network political news and advertising in the Nixon and McGovern campaigns." Journalism Quarterly 56: 106-115.

Katz, E., J. G. Blumler, and M. Gurevitch (1974) "Utilization of mass communication by the individual," in J. Blumler and E. Katz, eds. The uses of Mass Communication: Current Perspectives on Gratifications Research Beverly Hills, Sage), 11-35.

_____, M. Gurevitch, and H. Haas (1973) "On the uses of mass media for important things." American Sociological Review 38: 164-181

Katzman, N. (1974) "The impact of communication technology: promises and prospects." Journal of Communication 24: 47-58.

Larson, O. N., and R. J. Hill (1954) "Mass media and interpersonal communication in the diffusion of a news event." American Sociology Review 19: 426-433.

Robinson, J. P. (1972) "Mass communication and information diffusion." in F. G. Kline and P. J. Tichenor, Current perspectives in Mass Communication Research (Beverly Hills: Sage Publications).

Robinson, M. (1974) "The impact of the televised Watergate hearings." Journal of Communication 24: 17-30.

_____ (1977) "Television and American politics: 1956-1976." The Public Interest 48 (Summer): 3-39.

_____, and K. McPherson (1977) "Television news coverage before the 1976 New Hampshire primary: the focus of network news." Journal of Broadcasting 21: 177-186.

Shingi, P., and B. Mody (1976) "The communication effects gap: a field experiment on television and agricultural ignorance in India." Communication Research 3: 171-190.

Stauffer, J., R. Frost, and W. Rybolt (1978) "Literacy, illiteracy, and learning from television news." Communication Research 5: 221-232.

Tichenor, P. J., and D. B. Wackman (1973) "Mass media and community public opinion." American Behavioral Scientist 16: 593-606.

_____, G. A. Donohue, and C. N. Olien (1970) "Mass media flow and differential growth in knowledge." Public Opinion Quarterly 34: 159-170.

TABLE 1

ANOVA With Local Knowledge By Television Dependence and Education

Source	SS	df	F
Television Dependence	31.55	2	7.07*
Education	25.25	1	11.32*
T X E	14.86	2	3.33**
Error	1193.19	535	2.23
Total	1281.53	540	2.37

* p=.001

** p=.05

TABLE 2

Mean Knowledge Scores and Frequencies By Television Dependency and Education

Television Dependence	Education		
	Low	High	Total
Low Dependence	3.15 (n=62)	3.83 (n=110)	3.56 (n=173)
Moderate Dependence	3.28 (n=106)	3.27 (n=104)	3.27 (n=211)
High Dependence	2.53 (n=97)	3.19 (=62)	2.78 (n=160)
Total	2.97 (n=265	3.42 (n=276	3.20 (n=541

TABLE 3

ANOVA With Local Knowledge By Newspaper Dependence and Education

Source	SS	df	F
Newspaper Dependence	45.14	2	10.07*
Education	27.52	1	12.28*
N X E	2.28	2	0.51**
Error	1193.19	535	
Total	1281.53	540	

* $p < .0001$

** p NS

TABLE 4

Mean Knowledge Scores and Frequencies By Newspaper Dependency and Education

Newspaper Dependence	Education		
	Low	High	Total
Low Dependence	2.75 (n=137	3.06 (n=117)	2.88 (n=254)
Moderate Dependence	3.22 (n=87)	3.75 (n=80)	3.46 (n=167)
High Dependence	3.20 (n=41)	3.81 (n=79)	3.60 (n=120)
Total	2.97 (n=265)	3.42 (n=276)	3.20 (n=541)